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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,712	08/08/2006	Wolfgang Fischer	W1.2278 PCT-US	1992

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EXAMINER	
KRUER, STEFAN	

ART UNIT	PAPER NUMBER
3654	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/588,712	FISCHER ET AL.	
	Examiner	Art Unit	
	Stefan Kruer	3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *27, 29 - 36, 39 - 45 and 49 - 52* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *27, 29 - 36, 39 - 45 and 49 - 52* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Request for Continued Examination

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12 November 2009 has been entered.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 27, 29 – 36, 39 – 45 and 49 – 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehrieder (US 7,243,827, previously published under WO 02/090650) in view of Kenichi (JP-63235240) and in further view of Rosen (3,586,221).

Re: **Claims 27 and 43**, Lehrieder discloses a method for threading a material web (Col. 1, L. 55 – 57 & Col. 3, L. 18 – 22) in a web processing machine (01, Fig. 1) including:

- providing at least a printing unit (02, 03) is said web processing machine;
- providing a web receiving area (04, 06, 07, Col. 4, L. 32 - 38) in said web processing machine and before, in a direction of web travel, said printing unit;
- providing a web delivery area (08, 09, 11, Col. 3, L. 28) in said web processing machine and after, in a direction of web travel, said printing unit;
- providing a web threading path (defined by 22 of 12, Col. 3, L. 33 & 41 - 45) extending in said direction of web travel between said web receiving area and said web delivery area and through said printing unit in said web processing machine;
- providing a web threading means (12) adapted for receiving a leading end of said web material (Col. 1, L. 25 & 58 – 61, Col. 2, L. 8 – 14, Col. 5, L. 5 - 7);

- using said web threading means and threading said leading end of said material web through said web processing machine and from said web receiving area to said web delivery area during a web threading operation;
- providing a first web threading means drive motor (17) at said web receiving area and a second web threading means drive motor (17) at said web delivering area (Col. 4, L. 32 – 34), said motors having a respective first- and second motor strength (inherent to a drive capacity of a motor);
- regulating said first motor in said web delivery area at a predetermined motor torque (Col. 4, L. 5); and
- regulating a second motor in said web receiving area at said web delivery area at a predetermined web threading speed (Col. 2, L. 23 – 32, Col. 4, L. 32 – 38), during said web threading operation through said web processing machine and including said printing unit;
- at least one mechanically independent assembly (Col. 1, L. 7 - 9) in said web processing machine and a machine control (Col. 4, L. 39 - 64) *usable* to provide speed relevant signals to said one of said first and second motors;
- maintaining a constant tension (Col. 5, L. 5 – 7) in said material web during said web threading operation at a predetermined web threading speed; and
- an electronic guide axis for said machine control and being usable to transmit said speed relevant signals (Col. 4, L. 45 - 52); and
- though Lehrieder reviews pushing his threading means through his web processing machine and said included printing unit (Col. 2, L. 51 - 65), as well as having first- and second web threading means drive motors as said respective web receiving and web delivery areas, wherein said motors can be controlled for constant speed or torque, Lehrieder is silent with respect to:
  - using said second drive motor ***by*** pulling said web threading means against said regulated motor torque of said first web threading means drive motor.
  - providing a second motor strength greater than a first motor strength.

Attention is directed to Kenichi who teaches his web threading means (11- 25) comprising web receiving (16) and web delivery (13) areas wherein said web receiving area comprises a first motor (19) and said web delivery area comprises a second motor (18) , wherein said web threading comprises a web threading path (along 12) and said web threading means is adapted for receiving a leading end of a material web and maintaining a constant tension (Abstract), wherein Kenichi teaches operating his first motor operated at a regulated motor torque and his second motor at a regulated motor speed.

It would have been obvious to one of ordinary skill in the art to modify the reference of Lehrieder with the teaching of Kenichi to regulate said first and second motors i accordance with said torque and speed to provide uniform tension to a threading means and thereby uniform tension to a web material pulled by said threading means in a web processing machine and through a printer for reduction in broke.

However, Kenichi is silent with respect to his second motor strength being greater than a first motor strength.

Attention is directed to Rosen who teaches his method of threading a material web wherein a first motor web threading drive means (“push motor”) is regulated at a predetermined motor torque and a second motor web threading drive means (“pull motor”) is regulated at a predetermined motor speed (Abstract, Col. 1, L. 65 - Col. 2, L. 20) "... to prevent slack... at normal feed rates... and [to inhibit] … undue stress on, and stretching or breaking of the [material web]…” (Col. 1, L. 29 – 34).

It would have been obvious to one of ordinary skill in the art to modify the invention of Lehrieder and Kenichi with the teaching of Rosen to utilize a push-pull or torque-control vis-à-vis speed-control of first and second motors of a threading means, therein "slave" and "master" motors when threading a material web "... in tandem motor systems...' for tension control (‘”… feeding at a uniform selected rate…”), whereby said second motor has a strength greater than that of said first motor to maintain a desired sheet tension in a "pull-direction" for the avoidance of broke.

Re: **Claims 29, 44 and 51**, Lehrieder discloses a frequency converter and a calculating means (Col. 4, L. 45 - 64).

Re: **Claims 30 and 49**, Lehrieder discloses his second reel body (at either of 04, 06 &/or 07) and using said second motor for driving said second reel body for purpose of providing wound material and affording tension control independent of sheet/threading speed, and a first reel body (13) of his threading means upon which his threading means is wound.

Re: **Claims 31 - 32**, Lehrieder discloses regulating at least one of his first and second motors based on a current diameter of his reel body (Col. 5, L. 1), wherein said regulation is via a target value of a frequency load (Col. 4, L. 63).

Re: **Claims 33 – 36**, Lehrieder discloses:

- regulating a current diameter of his reel body (Col. 5, L. 1),
- including determining said number of rotations of said reel body in said receiving area (Col. 2, L. 33 – 50), and
- including determining said number of rotations of said reel body in said delivery area (Col. 2, L. 33 – 50), respectively.

Re: **Claim 39**, Lehrieder discloses at least one rotary drive (understood) for at least one mechanically independent assembly (02, 03) in said web processing machine and controlling said first motor with respect to a control of said rotary drive and said first motor with each other (Col. 1, L. 61 – 67).

Re: **Claim 40**, Lehrieder discloses material web reel changer, said reel changer having a drive and controlling one of said first and second drive motors and said reel changer driver correlated with each other with respect to their speed by using a machine control (Col. 4, L. 52 - 57).

Re: **Claim 41**, Lehrieder discloses web processing machine having a reel printing unit and printing unit drive (understood) further including controlling said second motor and said printing unit drive with respect to each other by using a machine control (understood, in order to maintain web tension/speed).

Re: **Claim 42**, Lehrieder discloses servo control in terms of target and measured tension values for optimizing tension control of his web. (Col. 2, L. 33 – 50 & Col. 4, L. 62).

Re: **Claims 44 - 45**, Lehrieder discloses his target value for his predetermined threading speed and a signal connection between his second motor and a control unit (Col. 4, L. 45 - 57).

Re: **Claims 49 - 51**, Lehrieder discloses:

- a first reel body (06) in said receiving area and a second reel body (13) in said delivery area (07), each of said first and second motors (Col. 4, L. 32 - 38) being adapted to drive a respective one of said first and second reel bodies,
- a rotation sensor on one of his first and second reel bodies (Col. 2, L. 37 and Col. 5, L. 19), and
- wherein said control device includes a calculating means usable to provide a frequency signal for said motor based on a predetermined threading speed and a number of rotations, respectively.

Claim 52, Lehrieder, Kenichi and Rosen disclose a control device *useable* to regulate said other of said first and second motors with respect to torque.

Response to Arguments

Applicant's arguments with respect to **Claims 27 and 43** have been considered but are moot in view of the new ground(s) of rejection.

The rejections of the previous office action were in response to the claim language. Applicant's arguments are *in part* based on the amended claim language applied to the prior art of record; consequently, this office action comprises a detailed response to Applicant's arguments.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Traise (3,955,737), Ueyama et al (2004/0108403) and Drake (1,925,866) are cited for methods and devices for threading a web in a web processing machine. Fischer et al (3,854,676) are cited for a review of speed versus torque control of dual threading mean drives operating in tandem with respect to change in reel diameters and tension control.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Kruer whose telephone number is 571.272.5913. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Q. Nguyen, can be reached on 571.272.6952. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866.217.9197 (toll-free).

/Stefan Kruer/
Examiner, Art Unit 3654
13 February 2010

/John Q. Nguyen/
Supervisory Patent Examiner, Art Unit 3654